

ADVANCED BI-DIRECTIONAL PREDICTIVE CODING OF VIDEO FRAMES**ABSTRACT**

Techniques and tools for coding/decoding of video images, and in particular, B-frames, are described. In one aspect, a video encoder/decoder determines a fraction for a current image in a sequence. The fraction represents an estimated temporal distance position for the current image relative to an interval between a reference images for the current image. The video encoder/decoder processes the fraction along with a motion vector for a first reference image, resulting in a representation of motion (e.g., constant or variable velocity motion) in the current image. Other aspects are also described, including intra B-frames, forward and backward buffers for motion vector prediction, bitplane encoding of direct mode prediction information, multiple motion vector resolutions/interpolation filters for B-frames, proactive dropping of B-frames, and signaling of dropped predicted frames.